in addition to the above factors. As described above, the light amount from the imaging optical system **3** actually changes continuously. In other words, when only the light amount is considered, the state of FIG. **4**B is most convenient. On the other hand, the state of FIG. **4**D is the most convenient, when the image stabilization performance or the like is addressed. FIG. **4**E illustrates an intermediate case between them in which the well-balanced position of the light amount and the image stabilization performance is set to the moving center in the image sensor image stabilization unit **14**. For example, where the imaging time is not so long, the image stabilization stroke is not necessarily large and it is thus conceivable to shift the moving center in the image sensor image stabilization unit **14** so as to prioritize the light amount. No composition shift occurs in the electronic preview mode.

[0059] As described above, the present invention can provide an image in which the peripheral light amount drop of the optical system and blur are suppressed while suppressing the composition shift.

[0060] While the present invention has been described with reference to exemplary embodiments, it is to be understood that the invention is not limited to the disclosed exemplary embodiments. The scope of the following claims is to be accorded the broadest interpretation so as to encompass all such modifications and equivalent structures and functions.

[0061] This application claims the benefit of Japanese Patent Application No. 2018-002782, filed on Jan. 11, 2018, which is hereby incorporated by reference herein in its entirety.

What is claimed is:

1. An imaging apparatus comprising:

an image sensor configured to capture an object image formed through an imaging optical system;

an image stabilization unit configured to move the image sensor on a plane orthogonal to an optical axis in the imaging optical system; and

a controller configured to control a movement by the image stabilization unit, and to determine a moving center in the image stabilization unit based on information on the imaging optical system in an electronic preview mode used to observe an image signal about the object image based on an output from the image sensor.

2. The imaging apparatus according to claim **1**, wherein the information on the imaging optical system includes at least one of positional information on the optical axis in the imaging optical system and information on a size of an image circle in the imaging optical system.

3. The imaging apparatus according to claim **1**, wherein the controller determines the moving center in the e image stabilization unit so that the moving center in the image stabilization unit accords with the optical axis in the imaging optical system in the electronic preview mode.

4. The imaging apparatus according to claim **1**, further comprising a mount configured to enable the imaging optical system to be attached,

wherein the controller determines the moving center in the image stabilization unit so that the moving center in the image stabilization unit accords with a center axis in the mount in the electronic preview mode.

5. The imaging apparatus according to claim **1**, wherein the controller determines the moving center of the image stabilization unit at a position that minimizes an electric power in the image stabilization unit in the electronic preview mode.

6. The imaging apparatus according to claim **1**, further comprising a mount configured to enable the imaging optical system to be attached,

wherein the controller determines the moving center in the image stabilization unit so that the moving center in the image stabilization unit is located on a straight line that connects the optical axis in the imaging optical system and a center axis in the mount with each other in the electronic preview mode.

7. The imaging apparatus according to claim **1**, further comprising an optical viewfinder unit configured to optically observe the object image,

wherein the controller determines the moving center in the image stabilization unit so that the moving center in the image stabilization unit accords with an optical axis in the optical viewfinder unit in an optical preview mode that enables the object image to be optically observed using the optical viewfinder unit.

8. A camera system comprising:

an imaging optical system;

an image sensor configured to capture an object image formed through the imaging optical system;

an image stabilization unit configured to move the image sensor on a plane orthogonal to an optical axis in the imaging optical system; and

a controller configured to control a movement by the image stabilization unit, and to determine a moving center in the image stabilization unit based on information on the imaging optical system in an electronic preview mode used to observe an image signal about the object image based on an output from the image sensor.

9. The camera system according to claim **8**, wherein the imaging optical system includes a storage unit configured to store information on the imaging optical system.

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